moist climate. Wine, and a dry, brisk, sunny air, induce a balance in favour of the back of the head—while tea and coffee, and a damp air, determined a balance in favour of the forehead. Was this the reason why so much coffee was used in France and so much spirits in the Low Countries?

Dr. Keenan here concluded his discourse, and is this evening to give his last lecture, to which we look forward with great interest, as he is to give his opinion on the causes of consumption (a malady unfortunately so prevalent in this country), and its most rational remedies and preventives.

ROYAL STATISTICAL SOCIETY.

On Monday evening, 19th February, the Right Hon. Lord Ashley, the president, took the chair at the meeting of the members, supported by the Hon. P. Bouverie, Mr. Charles Hindley, M.P., Mr. R. A. Slaney, M.P., Rev. J. Milman, Professor Prime, Dr. Guy, Dr. King, Mr. T. Tooke, F.R.S., Mr. B. B. Cabbell, F.R.S., and other members of the society. Mr. Fletcher read an interesting paper, prepared at the request of the society, on the statistics of the metropolis and its suburbs, descriptive of its present boundaries, its population, its limits of local government, geographical position, and statistical peculiarities, with the view of gathering useful information, for the purpose of aiding the statutory and other inquiries which are now being instituted into the present state of the metropolis. The paper, after stating that the City within the walls contained 70 parishes, and the City without the walls 11, occupying an area of 600 acres, proceeded to shew that, although it was the grand arena of commerce, upwards of one-twentieth of its population were resident without its walls, and that, as far as house occupation goes, it mansions at night time are half deserted. Southwark, although occupying 600 acres, containing nearly 100,000 inhabitants, was without the privilege of citizenship. After describing the geographical position and statistical peculiarities of Westminster, Marylebone, and the suburban districts, the remaining portion of the paper was devoted to an analysis of the present state of the endowed, voluntary, and assessed charities of London, from which it appeared that the funds of the corporation charities alone amount annually to 220,870*l.*, the general assessed charities to 77,000*l.*, and the endowed parochial charities of the City and the rest of the metropolis to 97,000*l.* per annum, the total annual revenue of the metropolitan endowed charities being 400,000*l.* The assessed charities by poor-rates were 551,202*l.* per annum. A discussion ensued upon the facts contained in the latter portion of the paper; and it was suggested with applause that a committee of the members of the society should be formed to enter upon an investigation of this subject, with the view of furnishing authentic information as to the agency which is employed and the use which is made of these enormous revenues.

INSTITUTE OF THE FINE ARTS.

A general meeting of this body was held at Tisbaum's Hotel, Adelphi, on Saturday evening last—Thomas Wyse, Esq., M.P., in the chair. The main objects of the formation of this institute are to unite, by intellectual and social means, the interests of artists, and to attempt to establish a free and liberal intercourse between the patrons and lovers of art and its professors. The meeting on Saturday was numerously attended. The minutes of the last general meeting, held 27th January last, having been read and confirmed, Mr. Fahey, the secretary, read the draft of a petition proposed to be presented to parliament by the institute, praying for the establishment in London, at the public expense, of a "Hall of Sculpture," which should comprise the finest casts procurable of all the most beautiful pieces of sculpture in the world. It is proposed that this hall should be open during the day to the public, and in the evening to artists for the purposes of study. The meeting, having approved of and adopted this petition, was addressed by Mr. Wyse, in an eloquent speech, on the importance of the cultivation of the fine arts, and the influence they exercise on the best interests of society. Mr. Charles Mackay then read a paper complimentary to the genius of Theodore Von Holst, an English artist of great ability, who died a few years ago. A paper, drawn up by Mr. Heaphy, on the practicability of keeping frescoes damp for several days, was also read, after which the meeting separated. The secretary announced that the next meeting would be held in March, at the rooms of the Institute, No. 7, Newman-street, for the election of a new council and other officers.

INSTITUTE OF BRITISH ARCHITECTS.

Feb. 19.—T. L. Donaldson, V.P., in the chair.

Drawings by F. Catherwood, Esq., of the architectural antiquities discovered in the ruined cities of Central America, were exhibited and described. The drawings exhibited tend to prove that a higher degree of civilization existed anciently on the American continent than historians have been willing to concede. One of the most singular facts necessary to be kept in mind, when considering the arts of this people, is, that they had no knowledge of the use of iron tools, but used copper instruments hardened by the admixture of tin or some other available metal, and with such tools their buildings of stone and sculptures in granite were worked. The Indians, besides a perfect knowledge of stone-cutting and laying stone, were well acquainted with various kinds of mortar, stuccoes, and cements; and large masses of excellent concrete are found in many of their buildings. They were, in fact, so far as the mechanical part went, accomplished masons. Their painting is superior both to their architecture and sculpture, and in no wise inferior to that of the Egyptians, and they went even a step beyond them in the blending of colours; approaching more nearly to the paintings found at Pompeii and Herculaneum. In one of the rooms of a large building are paintings covering the entire walls, from the floor to the ceiling. The figures are not more than from 4 to 5 inches in height, but most interesting subjects are represented, abounding with life, animation, and nature. Mr. Catherwood noticed the peculiar style of the buildings of Central America and Yucatan. The pervading type of the architecture consists in first constructing mounds or terraces (called by the Indians *teocallis*, and on these placing the sacred edifices and palaces. These *teocalli* are found in great numbers; they are frequently of large dimensions, of a pyramidal form, but do not terminate in a point like the Egyptian structures. They have on their summits platforms of sufficient extent for the temples, which contained the statues of the deities, and in front was conspicuously seen the sacrificial stone or altar, convex on its upper surface, so as to raise the chest of the human victim. The buildings are generally long, low, arched, and of a single story, a mode of construction frequently adopted by the Spaniards, on account of the shocks of earthquake to which many parts of the country are exposed. Another, and not less distinguishing feature, is the arched rooms found in almost all these buildings. These arches invariably consist of stones overlaying each other from opposite walls, until the last meet over the centre of the room; or, what is still more commonly the case, when the last stones approach within about 12 inches of each other, a flat stone is laid on the top, covered either with solid masonry or concrete, the joints of these stones are all horizontal. The roofs have a slight inclination, to throw off the rain, and are cemented. This form of arch appears at first sight original, and is so as regards the Indians, but the same principle was adopted in the earliest times in the Old World, and would probably suggest itself to any people requiring stone roofs over spaces too wide to be covered by flat stones. As regards analogies in architectural ornaments, the same argument may apply. That most frequently met with, and perfectly alike in Greece and in Yucatan, is one likely to be found wherever rope-making is understood—and what people so barbarous as to be unacquainted with this simple and primitive process? Other ornaments, offering remarkable coincidences of form, might be adduced, but the same reasoning will apply to them all.

INSTITUTION OF CIVIL ENGINEERS.

Feb. 27.—The President in the Chair.

The discussion on the subject of screw propellers was continued; the main dimensions of the Princeton United States steam frigate were given: she is 164 feet long, 30 feet beam, 22 feet 6 inches deep in the hold, draws 17 feet 6 inches water, and the propeller makes 32 revolutions per minute. The engines have two semicylindrical steam cylinders or chests containing vibrating pistons or flaps, with cranks upon the ends of their suspending pivots, both these are coupled by connecting rods to a main crank on the driving-shaft: the lengths of these cranks are so proportioned, that their alternate vibrations produce a rotary motion of the main crank, and thus act directly upon the propeller without the intervention of band or gearing. This principle was some years since tried successfully by Captain Ericson in a tug boat on the Thames, named the Robert Stockton, after the projector, who has been the means of introducing the system into the American Navy, and now commands the Princeton. It was mentioned that recently, on being examined at Marseilles, the cast-iron propeller of the Napoleon, French steamer, was found to be much affected by the galvanic action of the copper sheathing in the salt water, and was fast turning into a substance resembling plumbago, which was so soft as to be cut easily with a knife.

Some very interesting remarks were also made on the state of the metal guns recovered from the Royal George by General Paasley; but it appeared from very careful examination the effect of salt water alone upon cast-iron without the contact of other metals to produce galvanic action, that good hard grey cast-iron might be used for piles or other hydraulic works with great advantage; and instances were given of cast-iron, which exhibited no appearance of change after sixteen years' immersion in salt water and silt.

A further discussion also occurred on the subject of valves for pumps; and then a paper was read giving a description by Mr. Rhodes, M. Inst. C.E., of a bridge built of cast-iron girders upon timber piles, having a swing bridge at one extremity, with an opening of 40 feet span, through which the navigation of the river was carried on. The total length of the bridge, exclusive of the width of Hayes Island, was stated to be 558 feet 6 inches. It stretches across the river Shannon at Portumna by thirteen openings of 20 feet each from the Tipperary shore to Hayes Island, which is in the centre of the river, and thence by twelve openings of a similar span, and a swivel bridge of 40 feet span, to the Galway shore. The construction, which was executed from the designs of Mr. Rhodes, under the direction of the Commissioners of the Public Works for Ireland, was minutely described and was illustrated by some elaborate drawings, shewing every detail of the works, which were stated to have cost 24,131*l.*

The following papers were announced to be read at the meeting of March 5th, when the monthly ballot for members would take place:—

No. 624, "Description of the Bridge over the river Whitadder, at Allanton," by J. Syme.

No. 625, "Description of a cast and wrought iron trussed girder for Bridges, with a series of experiments on their strength," by F. Nash.

No. 626, "Account of the building of the Wellington Bridge over the river Ouse at Leeds," by J. Timperley.

The Bank of England has just published an engraving of peculiar interest to the city. It is a picture presented to them by the late respected Jeremiah Harman. The painting is by Marlow, and represents the Bank of England, Royal Exchange, and adjacent buildings, as they existed in 1790. The proceeds from the sale of the engraving, which is by Mr. Kernot, are to be given to the Widows' Fund of the Bank of England. A value as an historical record is given to it by the circumstance that in a short time not one of the buildings represented, excepting a small portion of Cornhill shewn in the back-ground, will be in existence

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